



## ATTACHMENT DEVICE FOR KEYS AND OTHER ITEMS

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### FIELD OF THE INVENTION

5 The present invention is directed to an attachment device, and more particularly to a device attachable to a belt or garment which facilitates connecting of various devices, including a key chain.

### BACKGROUND OF THE INVENTION

10 Various attachment devices such as key holders and retainers are known in the art, including those described in U.S. Patent Nos. 4,072,033 to Eckerdt; 3,979,934 to Isenmann; 3,906,763 to Bochory; 3,771,341 to Laufer; and 4,004,325 to Hubachek. None of such prior art devices, however, provide a device capable of providing attachment to a desired article (e.g., garment or a belt, or a variety of other items), and that is further constructed of materials, and additionally is of such a design that it facilitates: (1) easy access and secure  
15 attachment of, e.g., a key ring or a key chain, and (2) is easily attached and detached from the desired article. There is therefore a long felt but unsolved need for an inexpensive, easy to manufacture attachment device capable of being secured to any number of desired articles, but in particular a garment or a belt, to facilitate the easy, reversible attachment and detachment of a key ring, a key chain or any number of similar items.

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### SUMMARY OF THE INVENTION

The present invention is directed to a unique, simple and secure attachment device for use as, e.g., a key ring holder (e.g., apparatus 20 of Fig. 1) capable of being installed on a variety of items (denoted "desired articles" herein), including but not limited to clothing,  
25 belts, handbags, backpacks and luggage (e.g., a desired article 12 for attachment as in Fig. 1). Additionally, the present invention is directed to the attachment device in combination with a desired article to which the attachment device is attachable and detachable.

In a preferred embodiment, the attachment device (e.g., a key ring holder) of the present invention is constructed from a solid and durable material, such as metal or hardened

plastic. A preferred design of the attachment device of the present invention includes an extended post (e.g., post 24 of Fig. 1) connected to a shoulder (e.g., shoulder 22 of Fig. 1), wherein the post includes: (i) a first portion (e.g., post portion 25, Fig. 1) for supportively contacting the attachment device of the invention on the desired article 12, and (ii) an outwardly extending portion (e.g., post portion 27, Fig. 1) having at least one aperture (e.g., aperture 26 of Fig. 1) running therethrough for attaching various other hardware, including clips, snap hooks, quick links, shackles, rings etc (e.g., key chain 13, Fig. 11). The shoulder, in at least some embodiments, includes a first surface (e.g., surface 29 shown in Figs. 1 through 10) and an opposite second surface (e.g., surface 33 shown in Figs. 1 and 2). The shoulder is preferably securely mounted to an article (e.g., desired article 12 of Fig. 1 or Fig. 3 when such attachment is desired). In one embodiment, the shoulder is securely fastened to an article which may be a garment, such as jeans, pants, or overalls, thus facilitating easy access to the attachment device of the present invention for a person wearing such a garment. In other embodiments, the attachment device of the present invention can be reversibly attached to desired article (e.g., a garment), such as through a button hole (e.g., button hole 14 of Fig. 3) or other suitable aperture, thus allowing a user to use the attachment device of the present invention with a variety of articles 12 rather than having it securely attached to just one article. The aperture running through the post is preferably of a size to provide for attachment of a variety of connecting apparatuses including but not limited to rings, snap hooks, shackles, etc.

In other embodiments, more than one aperture is provided in the post (e.g., apertures 26 of Fig. 6) to facilitate more than one attaching device passing through said post. Thus, a variety of different key ring attachment means can be reversibly connected by using more than one of such apertures.

In still further embodiments, the post itself has a design to facilitate the reversible secure engagement of a connecting member or item. For example, the post can have an aperture running transversely therethrough which is large enough to extend completely through one wall of the post creating an open side of the post which is closed off by a reversibly and pivotally connected lever member. The preferably spring loaded lever is

maintained in a closed position during normal use such that any connecting article must force the pivoting member to move so that the interior of the post aperture can be accessed. The pivoting member can then move back to its normal, closed position, thus securing the connecting article inside the now closed aperture of the post.

5           Particular embodiments of the present invention are directed to garments having at least one attachment device (e.g., a key ring holder) of the present invention affixed thereto (e.g., overalls 32 of Fig. 11 having apparatus 20 attached thereto). Still other embodiments are directed to belts, preferably made of either plastic, leather or other suitable durable material having at least one attachment device of the present invention attached thereto.

10           Securement of the attachment device of the present invention to a garment or belt can be achieved in various different ways as will be appreciated by one of skill in the art. Preferably, however, the shoulder (e.g., shoulder 22 of Fig. 1) of the present invention can be attached directly to the garment or belt by a suitable adhesive and/or apertures can be provided in the shoulder for securing the shoulder to a garment or belt with rivets, thread, etc.

15           A still further embodiment involves a rivet connection made possible by the shoulder being of a sufficient diameter such that it will not pass through an aperture in a grommet (e.g., grommet 18 Fig. 1) but which permits the post of the present invention to pass therethrough.

To secure the post in such a grommet hole, various means can be employed. For example, the post may be maintained in a desired extended position, facilitating access to the at least  
20           one aperture in said post, simply due to the contact with, e.g., a person's body or undergarment pressing outward against the shoulder. Accordingly, the post is loosely slidable along the length of the post between the shoulder and the (nearest) aperture when there is no force against the shoulder for causing contact with the portion of the desired article immediately surrounding the desired article aperture through which the attachment  
25           device is attached to the desired article. Thus, when such force is applied, the first shoulder surface (e.g., surface 29 of Fig. 1) contacts a desired article to which the attachment device is attached. Accordingly, an embodiment of the attachment device of the present invention may include a "contact portion" for contacting a desired article and securing the embodiment of the attachment device thereto, wherein, the contact portion includes, e.g., the exterior surface

of the shoulder (e.g., surface 29 of Fig. 1), and the first portion (e.g., post portion 25, Fig. 1) described hereinabove. Since the post is loosely slidable within the desired article aperture between the shoulder and the connecting member or item within the aperture, the contact portion of the post for supporting the attachment device on the desired article also can vary along the length of the post between the shoulder and substantially the (nearest) aperture. Accordingly, even the largest extent of the post that is traverse (e.g., perpendicular) to the post's length fits through the desired article aperture. In the embodiments shown in Figs. 1-9, an extent of the end of the post that is attached to the shoulder is at least as large as any other extent of the post that is perpendicular to the length of the post.

Alternatively, the attachment device can be more firmly attached inside a grommet hole through the use of an exterior washer (e.g., washer 28, Figs. 10 and 11) that fits over the post once the post has extended through the grommet hole. Thus, the shoulder is of sufficient circumference and diameter so that it cannot pass through a grommet hole, but wherein the post may extend through the hole, whereby a washer is placed over the post to secure it in place. One will appreciate that the washer placed over the post may be of different configurations, colors, etc. and is primarily intended as a cosmetic component. The washer may not require a fixation to the post and/or fabric adjacent thereto and can simply be maintained in its position on the post due to the fact that an attaching ring or article through the post aperture will prevent the washer from falling off. The washer can, however, also be affixed to the grommet structure and/or the belt, fabric, etc. of the desired article to which the grommet is attached. Various adhesives, riveting structures, threaded connections, etc., are also possible in order to achieve securement of the attachment device of the present invention to a desired article.

In use, a person threads a connecting device, such as a snap hook or a circular, overlapping wire ring, through the at least one aperture provided in the post. Once attached, the connecting device will simply hang from the post, thus facilitating the carrying of key chains, key rings, and various other desired hardware.

The size, diameter and circumference of the aperture provided in the post can obviously vary depending upon the particular use intended. Preferably, the aperture is at

least about 1 centimeter in diameter, more preferably at least about 1/8th of an inch, and most preferably over about 1/4 of an inch. The size of the aperture can be varied to accommodate the attachment of various hardware, such as the girth of snap hooks or rings that may be used in conjunction with the attachment device of the present invention.

5           The length of the post can similarly be varied depending upon the particular uses to which the attachment device of the present invention is directed. The preferred length of the post is at least about 1 cm, more preferably at least about 1/4 inch and most preferably at least about 1/2 inch. The length should not, however exceed about one inch unless more than one aperture is provided therethrough. For example, if more than one aperture is provided in  
10   the post, the post can be of a longer length than if merely one aperture were afforded therein. Indeed, in one embodiment, several apertures are provided in a post to facilitate the attachment of more than one connecting means. Thus, different numbers and sizes of apertures may also be provided in a post to facilitate particular uses.

          The aperture through the post is preferably perpendicular to the length of the post, but  
15   can, in various embodiments, be in any angular orientation through the transverse section of the post. In a preferred embodiment, the aperture is a double counter sunk hole (see Figure 1) so as to facilitate the easy attachment and detachment of a connecting means. Moreover, the shape of the aperture can be of any desired geometry, but is preferably round. Thus, octangular, triangular, square and other shaped holes are within the scope of the present  
20   invention.

          The extent of the shoulder diameter (in a circular shoulder embodiment) can be of any size sufficient to anchor the present invention in an article to which it is attached. Preferably, the diameter of the shoulder is slightly less than the length of the post. As one of skill will appreciate, the particular geometrical configuration of the shoulder can vary, but in a  
25   preferred embodiment, it is circular in shape. Other geometries that are preferred lack sharp edges which could negatively affect articles to which the present invention is attached given that the weight of any connecting means on the post will create pivotal torsion on the edges of the shoulder against the garment, belt, or other article to which the attachment device of the present invention is attached, thus causing undesired abrasion.

In some embodiments, reinforcement of a garment or other desired article to which the attachment device of the present invention is attached may be necessary in order to insure proper and long term attachment of the shoulder to the garment, belt or other article. For example, with respect to a garment, a suitable additional patch material may be provided that provides additional tensile strength to the garment fabric surrounding and attaching to the shoulder region of the attachment device of the present invention.

Still a further embodiment of the present invention is directed to an embodiment where the shoulder has a transverse aperture provided therein to facilitate slipping the shoulder (22) over an existing button (30) of a garment (12), such as a metal button common on denim jeans. For example, traverse aperture 34 of Fig. 4 is representative, wherein this aperture has a first interior side 35 for contacting the hidden side of the button 30, and an opposing second interior side, interior to the shoulder, for contacting the button side 31. Accordingly by slipping the present device (20) over an existing button 30, easy attachment of the present attachment device to a desired article is made possible without the need to provide a separate hole in the desired article (e.g., jeans or other articles), and without the need to provide adhesives, separate rivets, etc. Thus, an embodiment of the attachment device of the present invention may include a "contact portion" for contacting, e.g., a button, of a desired article and securing the embodiment thereto, wherein, the contact portion includes the first and second interior surfaces of the shoulder described hereinabove.

In a preferred embodiment, the post and the shoulder are fixedly attached to each other, and indeed, in a most preferred embodiment, they are made integral with one another. Other embodiments, however include a threaded connection between the post and shoulder (Fig. 9), a ball and socket connection (Fig. 8), a snap-lock connection (not shown) etc. Again, while the attachment device of the present invention can be comprised of plastic or metal, in a preferred embodiment, the attachment device of the present invention is made from a metal material, such as brass, steel, nickel etc. or other metal alloys. Accordingly, in at least some embodiments, both the shoulder 22 and the post 24 are rigid. As illustrated in the accompanying Figs. 2, 5, 6, 7 and 8, the shoulder 22 and post 24 are fixedly attached to one another separately from any attachment to a desired article such as a garment, jeans,

pants, overalls, belt, purse, handbag, backpack, luggage etc. Since, in at least some embodiments of the attachment device, the shoulder and post are integral with one another, the shoulder 22 and the post 24 can not be separated from one another without damaging the attachment device so that it can no longer, without unintended repair effort not described  
5 herein, be used to perform at least one function for which the attachment device is designed and described herein. At least for the embodiments of the attachment device that have a shoulder and post that are integral, the shoulder and post are also fixedly attached to each other throughout the process of affixing the attachment device of the present invention to the desired article.

10 As shown in each of the embodiments of Figs. 1-3 and 5-10, to assure that such embodiments can be reversibly attached (i.e., attached and detached) to one or more desired articles, the post 24 does not include an extent that is expanded in a direction traverse to its length such that such an expanded extent would prevent moving the post along its length between its connection to the shoulder and the opposite end of the post that is not attached to  
15 the shoulder.

Although in a preferred embodiment the post is connected to the shoulder at a 90° angle, other angular orientations are well within the scope of the present invention. Indeed, Fig. 7, shows one embodiment of the attachment device of the present invention where the post is angled downwardly to limit the degree of extension of the post away from a belt or  
20 garment to which it is attached.

Other features and embodiments will be revealed to those of skill in the art from a review of the detailed description of preferred embodiments and the figures described and featured herein.

## 25 BRIEF DESCRIPTION OF THE FIGURES

Fig. 1 is a side view of the present invention (e.g., apparatus 20 and/or the desired article 12) showing one view of the aperture (26) running through the post (24), wherein the post (24) has a uniform cross section along its length between the shoulder (22) and at least the aperture (26);

Fig. 2 is a side view of the attachment device of the present invention turned 90° from that shown in Fig. 1;

Fig. 3 is a top view of the present invention showing the smaller diameter of the post (24) as compared to the larger diameter of the surrounding shoulder (22);

5 Fig. 4 is an alternative embodiment of the present invention wherein the shoulder (22) facilitates slipping over a button (30) existing on a garment (12);

Fig. 5 illustrates another embodiment to the attachment device of the present invention where the shoulder (22) and aperture (26) through the post (24) are of a distinct geometrical configuration, and in particular, the post (24) has a uniform cross section along its length between the shoulder (22) and the post's end that is opposite the post end attached to the shoulder, more particularly, the post (24) has a polygonal cross section;

Fig. 6 illustrates another embodiment of the attachment device of the present invention having more than one aperture (26) through the post (24);

Fig. 7 illustrates one embodiment of the attachment device of the present invention where the post (24) is angularly connected to the shoulder (22), wherein the post (24) has a uniform cross section along its length between the shoulder (22) and at least the aperture (26), and in particular, the post 24 is substantially a cylinder;

Fig. 8 shows a ball and socket connection between the shoulder (22) and the post (24);

20 Fig. 9 shows a threaded connection between the post (24) and the shoulder (22);

Fig. 10 shows one embodiment of the present invention wherein a washer (28) is fit over the post (24) for securement purposes; and

Fig. 11 shows the present invention as it is used on jeans with a key ring/chain (13).

## 25 DETAILED DESCRIPTION OF THE INVENTION

Referring to Figs. 1-11, the present invention, wherein attachment device 20 comprises a shoulder 22 connected to a post 24, such post having at least aperture 26 running transversely therethrough. In a preferred embodiment, the aperture 26 is a double counter sunk hole as shown in Fig. 1. The diameter of the shoulder 22 is preferably less than the



length of the post 24 but can be of any particular size in order to facilitate secure attachment of the key ring holder to a desired article, such as a garment, belt, purse, etc.

Fig. 6, shows one embodiment of the attachment device of the present invention having more than one aperture 26 provided through the post 24. Fig. 7 shows the aperture 26  
5 being provided at a slanted angle through the post 24.

Fig. 9, shows one embodiment where the post 24 is threadedly engageable with the shoulder 22, thus facilitating removal of the post 24 from the shoulder 22.

Fig. 10, shows one embodiment wherein the post 24 has a washer 28 which fits over the post.

10 Fig. 11, shows the present invention (e.g., including the embodiment of Fig. 10)-as it may be used on jeans with a key ring/chain 13. The post 24 is fed through a hole in a garment, belt, etc.

While various embodiments of the present invention have been described in detail, it is apparent that further modifications and adaptations of the invention will occur to those  
15 skilled in the art. However, it is to be expressly understood that such modifications and adaptations are within the spirit and scope of the present invention.